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                  U.S. National Patent Classification
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                  IPC display formats
 NEWS 15  MAR 31  CAS REGISTRY enhanced with additional experimental
                  spectra
 NEWS 16  MAR 31  CA/CAplus and CASREACT patent number format for U.S.
                  applications updated
 NEWS 17  MAR 31  LPCI now available as a replacement to LDPCI
 NEWS 18  MAR 31  EMBASE, EMBAL, and LEMBASE reloaded with enhancements
 NEWS 19  APR 04  STN AnaVist, Version 1, to be discontinued
 NEWS 20  APR 15  WPIDS, WPINDEX, and WPIX enhanced with new
                  predefined hit display formats
 NEWS 21  APR 28  EMBASE Controlled Term thesaurus enhanced
 NEWS 22  APR 28  IMSRESEARCH reloaded with enhancements
 NEWS 23  MAY 30  INPAFAMDB now available on STN for patent family
                  searching
 NEWS 24  MAY 30  DGENE, PCTGEN, and USGENE enhanced with new homology
                  sequence search option
 NEWS 25  JUN 06  EPFULL enhanced with 260,000 English abstracts
 NEWS 26  JUN 06  KOREAPAT updated with 41,000 documents
 NEWS 27  JUN 13  USPATFULL and USPAT2 updated with 11-character
                  patent numbers for U.S. applications
 NEWS 28  JUN 19  CAS REGISTRY includes selected substances from
                  web-based collections
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=> s crown ether (P2) (amino acid or peptide or protein or polypeptide)
MISSING OPERATOR 'ETHER (P2'
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s (crown (w) ether) (P2) (amino acid or peptide or protein or polypeptide)
MISSING OPERATOR ETHER) (P2
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The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=>  s (crown (w) ether) (P) (amino acid or peptide or protein or polypeptide)
         40164 CROWN
        529556 ETHER
       1173515 AMINO
<------User Break------>

SEARCH ENDED BY USER

=> s (crown (w) ether) (P) ((amino(w) acid) or peptide or protein or
polypeptide)
         40164 CROWN
        529556 ETHER
       1173515 AMINO
       4600329 ACID
        396477 PEPTIDE
       2168943 PROTEIN
        109060 POLYPEPTIDE
L1          451 (CROWN (W) ETHER) (P) ((AMINO(W) ACID) OR PEPTIDE OR PROTEIN OR
                POLYPEPTIDE)

=> s l1 (p) (benzoic or sulfonic or sulphonic)
         96713 BENZOIC
         84509 SULFONIC
          1603 SULPHONIC
L2             1 L1 (P) (BENZOIC OR SULFONIC OR SULPHONIC)

=> s l1 (p) (react or reaction or reacting or reacted or complex?)
        156460 REACT
       3183549 REACTION
        135032 REACTING
        198539 REACTED
       1829413 COMPLEX?
L3           189 L1 (P) (REACT OR REACTION OR REACTING OR REACTED OR COMPLEX?)

=> s l3 and  (BENZOIC OR SULFONIC OR SULPHONIC)
         96713 BENZOIC
         84509 SULFONIC
          1603 SULPHONIC
L4             2 L3 AND  (BENZOIC OR SULFONIC OR SULPHONIC)

=> d l4 bib ab 1-2

L4   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2005:36579  CAPLUS <<LOGINID::20080621>>
DN   142:114475
TI   Chemical reagents capable of selective attachment to and reaction with
     peptides and proteins
IN   Beauchamp, Jesse L.; Julian, Ryan R.; Stoltz, Brian M.; May, Jeremy A.
PA   USA
SO   U.S. Pat. Appl. Publ., 14 pp.
     CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 1
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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20050010059	A1	20050113	US 2004-782373	20040218
PRAI	US 2003-448290P	P	20030219		

AB ***Crown*** ***ether*** -contg. biomimetic reagents, e.g. (I) (R = Q) and (II) (R = Q), capable of selectively forming non-covalent ***complexes*** and initiating intermol. reactions with peptides in the gas phase are described and their reactions with primary amines and peptides in the gas phase was studied by electrospray ionization mass spectrometry (ESI-MS). The reagents are particularly useful in the synthesis of amine-contg. compds., and particularly gas phase ***peptide*** chem. The invention also relates to the use of diazo-based reagents, e.g. (III) (R = R1 = Q; R= Q, R1 = Et), that bind to and become covalently attached to ***amino*** ***acid*** residues, particularly residues contg. primary amines. It further relates to the use of reagents contg. acidic groups or transition metal binding functionalities that initiate selective cleavage of ***amino*** ***acid*** residues, particularly residues contg. primary amines. There is claimed a method of selectively forming noncovalent ***complexes*** and initiating intermol. reactions with amine-contg. compds. comprises ***reacting*** the amine-contg. compd. with a second compd. comprising at least one ***crown*** ***ether*** group and a moiety selected from acidic groups, transition metal binding groups and diazo groups, wherein the ***crown*** ***ether*** is 18-crown-6 ether and the acidic group is ***benzoic*** acid. Thus, 18-crown-6-methanol was treated with lithium diisopropylamine in THF at 70.degree. followed by etherification with 2,9-bis(bromomethyl)-1,10-phenanthroline in THF/CH2Cl2 at room temp. for 24 h gave the compd. I. ESI-MS of the compd. I, Cu(I), and H-Lys-Lys-OH (KK) indicated that compd. I formed an abundant noncovalent ***complex*** with the ***peptide*** KK and copper(I). Collisional activation of the base peak [1+KK+Cu+H]2+ resulted primarily in dissocn. of the ***complex*** into (1+Cu)+ and [KK+H]+ with an addnl. prominent peak corresponding to the loss of 44 Da from [KK+H]+. This loss is most likely explained as elimination of CO2 from the C-terminus. Collisional activation of the much less abundant ***complex*** [1+KK+Cu+2H]3+ yielded the loss of CO2 directly. In the absence of the Cu(I) ion, no loss of 44 Da was obsd. for either charge state, suggesting that Cu(I) effectively initiates this ***reaction*** .

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1988:6386 CAPLUS <<LOGINID::20080621>>
DN 108:6386
OREF 108:1219a,1222a
TI The use of crown ethers in peptide chemistry. Part 1. Syntheses of amino acid complexes with the cyclic polyether 18-crown-6 and their oligomerization in dicyclohexylcarbodiimide-containing solutions
AU Mascagni, Paolo; Hyde, Carolyn B.; Charalambous, Mario A.; Welham, Kevin J.
CS Sch. Pharm., Univ. London, London, WC1N 1AX, UK
SO Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1972-1999) (1987), (3), 323-7
CODEN: JCPKBH; ISSN: 0300-9580
DT Journal
LA English
OS CASREACT 108:6386

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AB   The synthesis of   ***amino***     ***acid***     ***complexes***   with
     cyclic polyether 18-crown-6 and their soly. properties in org. solvents
     are described.  Oligo homo-  ***amino***     ***acid***   peptides have
     been prepd. using the   ***crown***     ***ether***     ***complexes***
     and dicyclohexylcarbodiimide as coupling agent.  The mechanism leading to
     the formation of the oligopeptides involves transfer of one N-H proton
     from the   ***crown***     ***ether***     ***complex***   to the
     carbodiimide nitrogen.


=> d his

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     FILE 'CAPLUS' ENTERED AT 07:21:02 ON 21 JUN 2008
L1          451 S (CROWN (W) ETHER) (P) ((AMINO(W) ACID) OR PEPTIDE OR PROTEIN
L2            1 S L1 (P) (BENZOIC OR SULFONIC OR SULPHONIC)
L3          189 S L1 (P) (REACT OR REACTION OR REACTING OR REACTED OR COMPLEX?)
L4            2 S L3 AND  (BENZOIC OR SULFONIC OR SULPHONIC)

=> S L3 AND  (diazo)
         35274 DIAZO
L5            2 L3 AND  (DIAZO)

=> s l5 not l4
L6            1 L5 NOT L4

=> d l6 bib ab

L6   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2003:581554  CAPLUS <<LOGINID::20080621>>
DN   140:321682
TI   Biomimetic approaches to gas phase peptide chemistry: combining selective
     binding motifs with reactive carbene precursors to form molecular
     mousetraps
AU   Julian, Ryan R.; May, Jeremy A.; Stoltz, Brian M.; Beauchamp, J. L.
CS   Beckman Institute, California Institute of Technology, Pasadena, CA,
     91125, USA
SO   International Journal of Mass Spectrometry (2003), 228(2-3), 851-864
     CODEN: IMSPF8; ISSN: 1387-3806
PB   Elsevier Science B.V.
DT   Journal
LA   English
OS   CASREACT 140:321682
AB   Biomimetic reagents capable of selectively forming non-covalent complexes
     and initiating intermol. reactions with peptides in the gas phase are
     presented.  In the present work, 18-crown-6 ether (18C6) is utilized to
     bind specifically to various protonated primary amines, including the
     protonated side chain of lysine.  The use of multiple crown ethers is
     shown to be an efficient method for enhancing the binding energy, which is
     a crit. factor influencing the success of these reagents.  The binding
     energy must exceed any reaction barriers to the desired chem., otherwise
     simple dissocn. of the complex occurs.  Two reagents contg. acidic and
     transition metal binding functionalities, resp., designed to selectively
     cleave peptide bonds, are synthesized and tested exptl.  A third class of
     reagent designed to covalently attach to peptides utilizing carbene
     insertion chem. is also presented.  The results demonstrate that combining
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the recognition and binding powers of 18C6 with an easily activated ***diazo*** group allows for the efficient generation of a highly reactive carbene within a non-covalent complex. Intermol. insertion reactions initiated by the carbene can transform these non-covalent complexes into covalently bound mols. Electrospray ionization mass spectrometry and d. functional theory (DFT) are utilized to evaluate these intermol. insertion reactions. The results from expts. with several small mols. and peptides are presented. These ***diazo*** -based reagents prove to be highly versatile mols. capable of binding to, and with appropriate activation, becoming covalently attached to virtually any mol. that contains a primary amine. For this reason, they have been dubbed mol. mousetraps.

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ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L2 1 S L1 (P) (BENZOIC OR SULFONIC OR SULPHONIC)
L3 189 S L1 (P) (REACT OR REACTION OR REACTING OR REACTED OR COMPLEX?)
L4 2 S L3 AND (BENZOIC OR SULFONIC OR SULPHONIC)
L5 2 S L3 AND (DIAZO)
L6 1 S L5 NOT L4

=> s l3 and polyamine
37008 POLYAMINE
L7 0 L3 AND POLYAMINE

=> d his

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L1 451 S (CROWN (W) ETHER) (P) ((AMINO(W) ACID) OR PEPTIDE OR PROTEIN
L2 1 S L1 (P) (BENZOIC OR SULFONIC OR SULPHONIC)
L3 189 S L1 (P) (REACT OR REACTION OR REACTING OR REACTED OR COMPLEX?)
L4 2 S L3 AND (BENZOIC OR SULFONIC OR SULPHONIC)
L5 2 S L3 AND (DIAZO)
L6 1 S L5 NOT L4
L7 0 S L3 AND POLYAMINE

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